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# The Effectiveness of Integrative Behavioral Couple Therapy (IBCT) on Family Function of the Couples: A Randomized Clinical Trial



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#### ABSTRACT

**Background:** Achieving a healthy society depends on a normal and efficient family. Therefore, the present study investigates the effectiveness of integrated behavioral couple therapy in improving family function.

**Methods:** The current research was a semi-experimental study with a control and experimental groups including the pre-test, post-test, and 45 days follow up. The study population was all the couples who referred to the family therapy clinic of Shahid Beheshti Psychiatric Hospital in Zanjan in 2020. The 20 couples were selected from the available community and randomly divided into control and experimental groups. The experimental group received IBCT sessions of 120 minutes for 11 weeks, while the control group did not receive any intervention. The data were analyzed by SPSS 18 software and repeated ANOVA measures were used.

**Results:** The findings illustrated that mean score of family function had significant difference between experimental (2.27) and control (2.81) groups in the post test stage. Moreover, comparing the experimental (2.28) and control (2.79) groups in follow-up stage showed that the therapeutic effects were stable. Further, the result relieved that IBCT was effective on all the variables except behavior control.

**Conclusion:** Based on the results, IBCT can be used as a treatment choice for improving family function.

## 1. Introduction

The family consists of a marriage between a man and a woman which is one of the characteristics of a successful life, love, and expression of intimacy with each other as well as the constructive interaction between couples [1]. Marriage is one of the most critical stages of life that plays an important role in mental health and without containing the right conditions to meet the needs of couples it causes negative results. Family function, family adaptation ability to life changes, conflicts and solving contradictions, success in

disciplinary patterns and solidarity among members, respecting boundaries between individuals, and implementing the rules and principles governing it, is to protect the family equilibrium [2]. Some characteristics of a functional family are open communication, effective control of mental stress, leadership and empathy, expression of love, interest, and personal responsibility. Family is the place of physical satisfaction, intellectual and emotional needs and being aware of biological and psychological needs is necessary [3]. Lack of awareness of these needs causes psychological and communication problems among family



members which can lead to divorce if it continues [4]. During the last fifty years, cultural developments have had a significant impact on couple relationships and family structure. These structural changes as the result of cultural changes are effective factors in increasing the divorce. The recent statistics, which published by various communities, have revealed that the separation of couples is increasing. According to recent statistics provided by the Civil Registration Organization in Iran, 25% of marriages that took place from March to December 2015 have led to divorce [5]. Poor family functioning can lead to adolescents' participation in high-risk behaviors, low quality of life, and reduced happiness and life satisfaction. In addition, divorce is the experience of negative emotions in all psychological, physical, social and emotional aspects and causes poor function and inefficiency of the whole family [6]. The six areas of interactive patterns including problem solving, communication, role assignment, response, emotional attachment, and behavior control help us to understand the ways which the family uses to communicate with members and the world around them. However, none of these can interpret family function individually [7]. The aim of participating couples in family and couple therapies is to improve exchanges, increase trust, and strengthen intimacy despite the persistence of problems. Moreover, to find out whether there is any hope for them to continue living together or not [8]. The quality of relationship between spouses affects the family health and facilitate increasing or decreasing the mental health level of couples [9]. Several studies have reported that families perform better when the spouses are satisfied with the marital relationship [10]. One of the main applications of psychology is to apply its principles to find new ways of life, prevent problems, and promote health [11]. Another couple therapy which helps couples to reduce their incompatibilities by combining change and acceptance is integrated behavioral therapy [12]. Theorists of this approach, Christensen and Jacobson (2000), believe that the problems between couples cannot be solved by behavioral changes because couples lose their tolerance for differences over time and these differences can cause emotional arousal. In this model, intervention strategies have more emphasis on couples' emotional reactions [13]. This approach which is based on background originates from traditional behavioral couple therapy (TBCT) helps couples to increase their satisfaction and adaptation; thus, emotional acceptance techniques have been used to overcome some of the limitations of TBCT. Acceptance-based interventions are assumed to lead to spontaneous changes by creating acceptance which is done by the following four ways: 1. Empathic connection about the problem, 2. The neutrality in examining the problem, 3. Increase tolerance in facing an annoying problem, and 4. Self-care increasing against unsolvable problems [14]. The IBCT is a balanced approach that includes both change and acceptance [15]. Dastan et al. (2015) in their study investigated the comparison of the

effectiveness of narrative couple therapy and IBCT on improving conflict resolution tactics and increasing marital adjustment of couples referring to counselling centers in Ahvaz. Based on the findings, it can be concluded that narrative couple therapy and IBCT interventions change conflict resolution tactics and increase marital adjustment [16]. The results of Shamir et al. (2016) on investigation of Gottman couples therapy effectiveness on family function and marital adjustment of couples divorce applicant approved the effectiveness of Gottman couple therapy [11]. Seyyed Moharrami et al. (2016) reported that structured group counselling had an effect on family function and marital satisfaction of married women [10]. Therefore, the increase in problems, dissatisfaction, and consequences of divorce indicates the importance of spouse's relationships and their problems. Generally, one of the factors affecting the quality of spouse's relationships and family health is family function. In order to improve family function, and due to the lack of research background in this statistical population, it was felt that if IBCT is effective and sustainable on family function? The aim of this work was to investigate the effect of IBCT on improving family function and treatment stability in the follow-up stage.

## 2. Materials and Methods

The present work was a semi-experimental study with a pre-test, post-test, and 45 days follow up with a control and experimental groups. The population of the study was all the couples referred to the family therapy clinic of Shahid Beheshti Psychiatric Hospital in Zanjan in 2020. The 20 couples were selected from the available mention community and divided randomly into experimental and control groups. The subjects in the control group did not receive any intervention until the end of the experiment and were placed in a waiting list. The experimental group received sessions of IBCT for 11 weeks and each of the intervention session lasted 120 minutes. At the end of the eleventh session, participants were re-evaluated by the family function questionnaire and the follow-up stage was coordinated after 45 days. The participants in the follow-up stage were also evaluated by the above questionnaire. Inclusion criteria included: 1. having a minimum level of diploma education, 2. Minimum age 20 and maximum 50 years, 3. At least one year of living together, 4. achieving a higher score in the family function questionnaire. Moreover, the exclusion criteria of the study included: 1. under medical treatment and psychotherapy, 2. Referrals were due to addiction and infidelity. Table 1 provides a brief description of the IBCT sessions. In order to collect the required data, the family function questionnaire was used. The 60-item questionnaire was prepared by Epstein et al. (1983) and its purpose was to measure family function according to the McMaster model. For each question a score of 1 to 4 was

assigned including 1 (strongly agree), 2 (agree), 3 (disagree), and 4 (completely disagree) .The answers to the questions were direct and reverse. In this test, a high score indicates poor family function and lower scores indicate good function. This pattern identifies 6 dimensions of family function including problem solving, communication, roles, effectiveness response, emotional participation, and behavior control. In addition, the seventh subscale is related to general function. The statements that describe abnormal function are given a reverse score. Family assessment tool with alpha coefficients of its subscales from 72% to 92 % has been used with good internal consistency and has a predictive and concurrent validity [18]. Zadeh Mohammadi and Malek Khosravi (2006) reported the Cronbach's alpha coefficient for the whole questionnaire (94 %), general function (78%), roles (71%), communication (70%), problem solving (72%), affective responsiveness (%73), behavior control (66%), and affective involvement (71%) [19].

The collected data were analyzed using descriptive statistics and repeated measures analysis of variance tests, Mauchly's sphericity test, Box test, and Bonferroni post hoc test with SPSS software version 18 and a probability value of 0.05.

#### 3. Results and Discussion

In this study, the mean age of the participants was 37.5 ± 6.48 years. In addition, 56.7% of the participants had bachelor degree or higher, 11.7% had associate degree and 31.7% had diploma. As a result, the mean score of family function in the pre-test stage was almost the same as the experimental groups of 2.64 and the control group of 2.68. A repeatedmeasures analysis of variance test was used for analysis. In order to ensure the assumption of the normality of the distribution of research variables scores, two indices of skewness and elongation have been used according to the results of Table 3. All skewness coefficients are between -3 and 3 and elongation coefficients are between -5 and 5. Therefore, there is a prerequisite for the normality of the scores of the research variables. The results showed the value of the Mocheli sphericity test is not significant at the error level less than 0.05. Therefore, the sphericity of the variancecovariance matrix of the dependent variable can be accepted. In order to homogenize the covariance and test the same assumption of the covariance matrix in family function, Box's M test was used in both control and experimental groups. Since the *P* value is greater than 0.05, the covariance matrix of pre-test, post-test, and follow-up in the groups are equal to each other. Regarding the results of repeated-measures analysis of variance family function test in the control and experimental groups in the pre-test, post-test, and follow-up Stages which are shown in Table 4, the significance or nonsignificance of the whole model, the separate effects of each

**Table 1:** Integrative behavioral couple therapy sessions

Table 1: Integrative behavioral couple therapy sessions						
Sessions	Brief description					
First	Introduction of the therapist - Defining treatment goals - Defining treatment expectations and working methods - Assessing the suitability of couples for treatment - Familiarity with current problems - Obtaining a developmental history- Introduction to the strengths of the relationship and obtaining behavioral examples					
Second	Assessing the specific problems of each couple - Initial orientation - Understanding the conflict pattern - Understanding the conflict pattern of the source family - Assessing physical violence - Assessing each party's commitment to treatment - Assessing extramarital relationships					
Third	Review of the previous sessions - Summarize - Review of the written assignment prepared by the therapist - Sharing questionnaire information and interviewing the clients - Expressing expectations from the treatment - Creating participation in the formulation - Identifying problem areas - Expressing topics					
Fourth	Empathetic Alliance - Marital turmoil equals: Charge + Pain - Acceptance equals: Pain - Charge - Homework based on Empathetic Alliance - Putting the other person in the right place - Creating a safe space to express annoyances					
Fifth	Talking about a problem without charge against each other - Understanding the interactive sequence that led to the couple's failure - Engaging spouses in trying to understand the constant comparisons and conflicts that happen to them - Using the fourth chair so that the problem is assumed in the fourth seat.					
Sixth	Review of the previous sessions - Summarize - Do not try to change the other party - Point to the positive aspect of negative behavior - Desensitize the negative behavior of each spouse - Sensitize the aggressor spouse to the effect of his behavior on the other side					
Seventh	Assessing the homework done - Performing negative behavior negatively - Advising couples about using homework - Identifying negative behaviors that can be done at home - Planning to perform negative behaviors at home - Analyzing spouse feedback					
Eighth	Review the previous sessions - Summarize - Identify the needs of each couple - Motivate to define activities tailored to the needs - Motivate to respect the independence of both parties					
Ninth	Increasing positive behaviors and interactions through behavior exchange - Identifying the behaviors that each spouse can do for the other to increase relationship satisfaction - Looking back and receiving positive behaviors					
Tenth and eleventh	Training couples to discuss without resorting to destructive methods - Training skills as a speaker and listener - Training constructive discussion to solve the problem - Training and practicing problem definition skills - Training and practicing problem solving skills - Perform follow-up and specify the date of the follow-up session					

significance of the whole model, the separate effects of each time variables, intervention and interaction of the two on the component of family function, can be observed. According to the results, the effect of the intragroup variable of time on the total score of the family function and general function, roles, behavior control variables is significant ( $P \le 0.05$ ), i.e.

the score of this component in post-test and follow-up is significantly different from the pre-test. Furthermore, the effect of the intergroup variable of the intervention was significant in reducing the score of the family function component except behavior control ( $P \le 0.05$ ), i.e. the IBCT intervention was able to reduce the score of the family function component compared to the control group. The interaction between time and intervention and the simultaneous effect of these two variables on the score of the family function component is also statistically significant expect behavior control ( $P \le 0.05$ ).

**Table 2:** Descriptive indicators of the family function score in the pre-test, post-test, and follow-up stages by the experimental and control groups

Variable	Stages	Experimental groups		Control g	roups
		Mean	SD	Mean	SD
General	Pre-test	2.85	0.45	2.75	0.41
function	Post- test	2.24	0.23	2.9	0.29
	Follow- up	0.27	2.85	0.45	2.28
Problem solving	Pre-test	2.51	0.49	2.36	0.52
	Post- test	2.12	0.29	2.68	0.37
	Follow- up	2.21	0.33	2.46	0.5
Communication	Pre-test	2.56	0.47	2.59	0.55
	Post- test	2.28	0.28	2.85	0.34
	Follow- up	2.21	0.33	2.86	0.27
Roles	Pre-test	2.57	0.39	2.87	0.31
	Post- test	2.31	0.25	2.9	0.28
	Follow- up	2.28	0.31	2.89	0.25
Affective	Pre-test	2.51	0.49	2.54	0.52
responsiveness	Post- test	2.17	0.27	2.77	0.23
	Follow- up	2.27	0.48	2.69	0.29
Behavior	Pre-test	2.7	0.23	2.6	0.25
control	Post- test	2.48	0.21	2.42	0.24
	Follow- up	2.43	0.23	2.5	0.24
Affective	Pre-test	2.58	0.37	2.86	0.44
involvement	Post- test	2.28	0.3	3.06	0.36
	Follow- up	2.34	0.46	3.19	0.37
Total score	Pre-test	2.64	0.33	2.68	0.28
Family function	Post- test	2.27	0.18	2.81	0.19
	Follow- up	2.28	0.33	2.79	0.11

In other words, the score of the family function component participating in the intervention was different at different stages. Bonferroni post hoc test was used to compare the two stages of intervention in the family function component in the control groups and the experimental group. As indicated by Table 5, there was a significant difference between pretest and post-test stages of family function. Additionally, there was a significant difference in general function and behavior control between pre-test and post-test and also between pre-test and follow-up stages. However, there was no significant difference between post-test and follow-up stages. Based on the results of this test, IBCT shows a statistically significant lasting effect on family function in the subjects.

The results showed that the mentioned intervention had a positive effect on reducing the family function score. Therefore, in terms of family function variable a significant difference was observed between couples who were under couple treatment and couples who were not treated. The findings of the current study are in agreement with the findings of Christensen et al. (2010). They showed that IBCT is an effective treatment in reducing the steps towards divorce, duration of treatment and reducing the divorce rate over time [20]. Moreover, Christensen et al. (2004) showed that the relationship of 67% of couples had improved with IBCT at the level of clinical significance after two years [21]. In another study by Peleg (2008) it was shown that marital satisfaction has inverse relation with emotional cut off, which confirms the results of the present study [22]. Moreover, the results of this study are consistent with the findings of Baucom et al. (2015) which confirmed the effectiveness of IBCT [23]. The findings of Montessi et al. (2013) in the effectiveness of IBCT on disturbed couples showed that this model increases safe behaviors and reduces conflicts in marital relationships and the tendency to divorce by rebuilding the couple's relationship [24]. In other study, Shaker Dolagh et al. (2014) reported that cognitivebehavioral couple therapy was effective in improving family function in divorce applicants [25]. Further, Abbasi Borvandargh et al., (2013) reported similar results to our findings on the effectiveness of IBCT on improving the pattern of communication beliefs and also, similar findings on the resolving conflict and marital adjustment

**Table 3:** Results of skewness and elongation test to establish the normal distribution of scores

Skewness	Kurtosis
-0.096	-0.828
0.01	-0.459
0.043	-0.627
-0.37	-0.388
-0.473	-0.502
-0.26	0.148
-0.055	0.365
-0.23	-0.942
	-0.096 0.01 0.043 -0.37 -0.473 -0.26 -0.055

**Table 4:** Analysis of variance test results of repeated measures of the family function of control and experimental groups in pre-test, post-test, and follow-up stages

Variable	Source		Sum of squares	Df	Mean square	F	<i>P</i> Value	Partial eta squared
Total score family function	Within subject	Time Error	0.37 3.47	2 76	0.18 0.046	4.05	0.02	0.096
	Between subject	Intervention Error	3.99 3.77	1 38	3.99 0.099	40.203	<i>P</i> < 0.001	0.514
	Interaction	Time * Intervention	1.55	2	0.77	16.97	<i>P</i> < 0.001	0.309
General function	Within subject	Time Error	1.45 6.59	2 76	0.73 0.087	8.38 19.73	P< 0.001	0.181
	Between subject	Intervention Error	4.303	1 38	4.303 0.218	19.75	P< 0.001	0.342
	Interaction	Time * Intervention	8.28 3.39	2	1.69	19.58	<i>P</i> < 0.001	0.34
Problem solving	Within subject	Time Error	0.526 12.25	2 76	0.263 0.161	1.63	0.2	0.043
	Between subject	Intervention Error	2.002 10.32	1 38	2.002 0.272	7.36	0.01	0.162
	Interaction	Time * Intervention	2.72	2	1.35	8.43	<i>P</i> < 0.001	.0182
Communication	Within subject	Time Error	0.041 9.87	2 76	0.021 0.13	0.159	0.8	0.004
	Between subject	Intervention Error	5.28 7.21	1 38	5.28 0.19	27.86	<i>P</i> < 0.001	0.423
	Interaction	Time * Intervention	2.2	2	1.101	8.47	P< 0.001	0.182
Roles	Within subject		0.42 5.14	2 76	0.21 0.068	3.105	0.05	0.076
			7.69 5.32	1 38	7.69 0.14	54.97	<i>P</i> < 0.001	0.591
			0.65	2	0.325	4.81	0.01	0.112
Affective responsiveness			0.074 8.008	2 76	0.037 0.105	0.35	0.7	0.009
			3.66 10.22	1	3.66 0.269	13.63	<i>P</i> < 0.001	0.264
			1.72	2	0.85	8.14	P< 0.001	0.176
Behavior control			1.035 2.96	2 76	0.517 0.039	13.26	P< 0.001	0.259
			0.03 3.28	1 38	0.03 0.086	0.351	0.55	0.009
			0.16	2	0.08	2.05	0.13	0.051
Affective			0.18	2	0.09	0.83	0.4	0.021
Involvement			8.18	76 1	0.108	E2 02	D < 0.001	0.00
			12.19 8.9	1 38	12.19 0.234	52.03	P< 0.001	0.99
			1.93	2	0.96	8.95	P< 0.001	0.191

By Dastan *et al.* (2015) was approved the results of our study on effectiveness of IBCT [16, 26]. Regarding the effectiveness of IBCT it can be expressed that in intimate relationships the need for attention, value, and desirability between couples is mutually satisfied [27]. For instance, learning to express emotions, using "I" pronoun, active listening, identifying communication barriers, and eliminating them lead to less disrespect, blame, and humiliation between couples [28]. The second strategy of IBCT is unit neutrality in problem solving. For example, spouses focus on how to help each other instead of blaming. Moreover, they focus on their ability to interact during a conflict, including stimuli that upset each other and prevent

constructive discussions. Finally, couples are encouraged to increase their tolerance for conditions out of their control. In addition to emotional acceptance, IBCT changes behavior by helping couples to recognize, do, and enjoy from discussions about successful activities that each person can do for the other. Furthermore, communication skills such as speaker listener skills and problem solving strategies are taught to couples [29]. Additionally, it is expected in this intervention that the growing acceptance leads to increased satisfaction in relationships. It is assumed that incompatibility is between couples who do not know that insisting on changing each other leads to resistance and emotional reactions between them as problematic as their behavior [30].

**Table 5:** Results of Bonferroni post hoc test for binary comparison of intervention stages in the family function component in the control and experimental groups

Variable	Time 1	Time 2	Mean differences	Std division	<i>P</i> Value
Total score family function	Pre-test	Post-test	0.118	0.048	0.055
		Follow-up	0.118	0.056	0.125
	Post-test	Pre-test	-0.118	0.048	0.055
		Follow-up	9.37	0.038	1.00
	Follow-up	Pre-test	-0.118	0.056	0.125
	-	Post-test	-9.37	0.038	1.00
	Pre-test	Post-test	0.233	0.066	0.003
		Follow-up	0.234	0.075	0.011
General function	Post-test	Pre-test	-0.233	0.066	0.003
		Follow-up	0	0.055	1.00
	Follow-up	Pre-test	-0.234	0.075	0.011
	•	Post-test	0	0.055	1.00
	Pre-test	Post-test	0.033	0.072	1.00
		Follow-up	0.154	0.114	0.555
Problem solving	Post-test	Pre-test	-0.033	0.072	1.00
G		Follow-up	0.121	0.077	0.381
	Follow-up	Pre-test	-0.154	0.114	0.555
		Post-test	-0.121	0.077	0.381
	Pre-test	Post-test	0.012	0.077	1.00
	110 1000	Follow-up	0.044	0.093	1.00
Communication	Post-test	Pre-test	-0.012	0.077	1.00
	r ost test	Follow-up	0.032	0.07	1.00
	Follow-up	Pre-test	0.044	0.093	1.00
	ronow up	Post-test	-0.032	0.07	1.00
	Pre-test	Post-test	0.116	0.057	0.148
	ric test	Follow-up	0.133	0.066	0.150
Roles	Post-test	Pre-test	-0.116	0.057	0.148
Roles	1 ost test	Follow-up	-0.017	0.05	1.00
	Follow-up	Pre-test	-0.133	0.066	0.150
	10110W-up	Post-test	-0.17	0.05	1.00
	<b>D</b>				
	Pre-test	Post-test	0.058	0.075	1.00
A 664:	<b>D</b>	Follow-up	0.045	0.085	1.00
Affective responsiveness	Post-test	Pre-test	-0.058	0.075	1.00
		Follow-up	-0.014	0.053	1.00
	Follow-up	Pre-test	-0.045	0.085	1.00
		Post-test	0.014	0.053	1.00
	Pre-test	Post-test	0.206	0.05	0.001
P.1	_	Follow-up	0.186	0.04	0.001
Behavior control	Post-test	Pre-test	-0.206	0.05	0.001
		Follow-up	-0.02	0.035	1.00
	Follow-up	Pre-test	-0.186	0.046	0.001
	_	Post-test	0.02	0.035	1.00
Affective Involvement	Pre-test	Post-test	0.049	0.072	1.00
		Follow-up	-0/045	0.08	1.00
	Post-test	Pre-test	-0.049	0.07	1.00
		Follow-up	-0.095	0.06	0.498
	Follow-up	Pre-test	0.045	0.08	1.00
		Post-test	0.095	0.06	0.498

<sup>\*</sup> Time means changes between pre-test, post-test, and follow-up

Using acceptance methods along with traditional methods of change including communication training, behavioral exchange, and problem solving enables couples to resolve external problems and conflicts, and leads to lasting changes [31]. In the present study, in explaining the ineffectiveness of IBCT on the variable of behavior control, it can be said that IBCT, focuses on emotional change and then on behavior change. In acceptance techniques, the person can patiently accept or cope with problematic behaviors because one understands oneself, one's spouse, and one's relationship. On

the other hand, due to the initial focus on detecting communication problems and the lack of direct instructions to increase adaptive function, it is thought that improvement in this treatment should be gradual and slow. The current study which was conducted in Zanjan city has been associated with several limitations. Therefore, it is necessary to be careful in extending the results to other places and cities. In fact, the findings cannot be generalized to larger population due to limited number of samples as a result of prevalence of Covid-19 and the unwillingness of some couples to participate in the study.

# 4. Conclusion

It was concluded that IBCT has an effect on promotion of family function and showed a statistically significant lasting effect on family function in the subjects. The results of this research confirm the findings of previous researches and can be used in the development of educational programs at the practical level. Moreover, it is suggested that future researches can be conducted in other communities and the follow-up phase extends to one year.

# **Authors' Contributions**

Zahra Heidari: Conceptualization; Study design; Data analysis; Project administration; Writing original draft; and Revision of the manuscript; Mohammad Ghamari: Conceptualization; Supervision; and Revision of the manuscript. Alireza Jafari: Conceptualization; and Revision of the manuscript. Alireza Armani Kian: Sessions supervision.

#### Conflicts of Interest

The Authors declare that there is no conflict of interest.

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